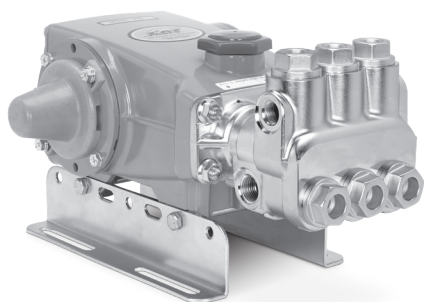


DATA SHEET

7 FRAME PLUNGER PUMPS



Brass Models: 530, 550



Model 530 Shown
(Mounting rails and shaft protector sold separately)

FEATURES

- Triplex plunger design ensures high efficiency and low pulsation.
- Durable V-packings (Model 550) or high-pressure seals (Model 530) are lubricated and cooled by the liquid being pumped.
- Pre-set low-pressure seals provide secondary protection against external leaks, and require no packing adjustment.
- Special high-density, polished, concentric plungers provide a true wear surface and extended seal life.
- Pump comes standard with NBR seals. Alternative seal materials are available for higher temperature or chemical compatibility.

SPECIFICATIONS

U.S. Measure

Metric Measure

530

Flow	5.0 gpm	19 lpm
Pressure Range	100–2500 psi	6.9–172 bar
Pump RPM*	1100 rpm	1100 rpm
Bore	0.708"	18 mm
Stroke	0.945"	24 mm

550

Flow	5.0 gpm	19 lpm
Pressure Range	100–3000 psi	6.9–207 bar
Pump RPM*	1415 rpm	1415 rpm
Bore	0.630"	16 mm
Stroke	0.945"	24 mm

*Pump minimum is 100 RPM.

COMMON

SPECIFICATIONS

U.S.

Metric

Inlet Pressure Range	Flooded to 60 psi	Flooded to 4.1 bar
Crankcase Capacity	25 oz	0.75 l
Maximum Liquid Temp. (NBR)	160° F	71° C

Alternative seals available for higher temperatures up to 180° F

Inlet Ports (2)	½" NPT(F)	½" NPT(F)
Discharge Port (2)	¾" NPT(F)	¾" NPT(F)
Shaft Diameter	0.945"	24 mm
Weight	26.5 lbs	12.0 kg
Dimensions	13.58 x 9.61 x 5.91"	345 x 244 x 150 mm

ALTERNATIVE SEAL CONFIGURATION

MATERIAL	SUFFIX CODE	MAXIMUM TEMPERATURE	
NBR	—	160° F	(71° C)
FPM	.0110	180° F	(82° C)
HT	.3000	180° F	(82° C)

See **Tech Bulletin 002** for inlet conditions and RPM at high-temperature.

DETERMINING THE PUMP RPM

$$\frac{\text{Rated gpm}}{\text{Rated rpm}} = \frac{\text{Desired gpm}}{\text{Desired rpm}}$$

DETERMINING THE REQUIRED HP

$$\frac{\text{hp}}{\text{(Electric Brake)}} = \frac{\text{gpm} \times \text{psi}}{1460}$$

DETERMINING MOTOR PULLEY SIZE

$$\frac{\text{Motor Pulley OD}}{\text{Pump rpm}} = \frac{\text{Pump Pulley OD}}{\text{Motor rpm}}$$

Refer to pump **Service Manual** for repair procedure and additional technical information.

PARTS LIST

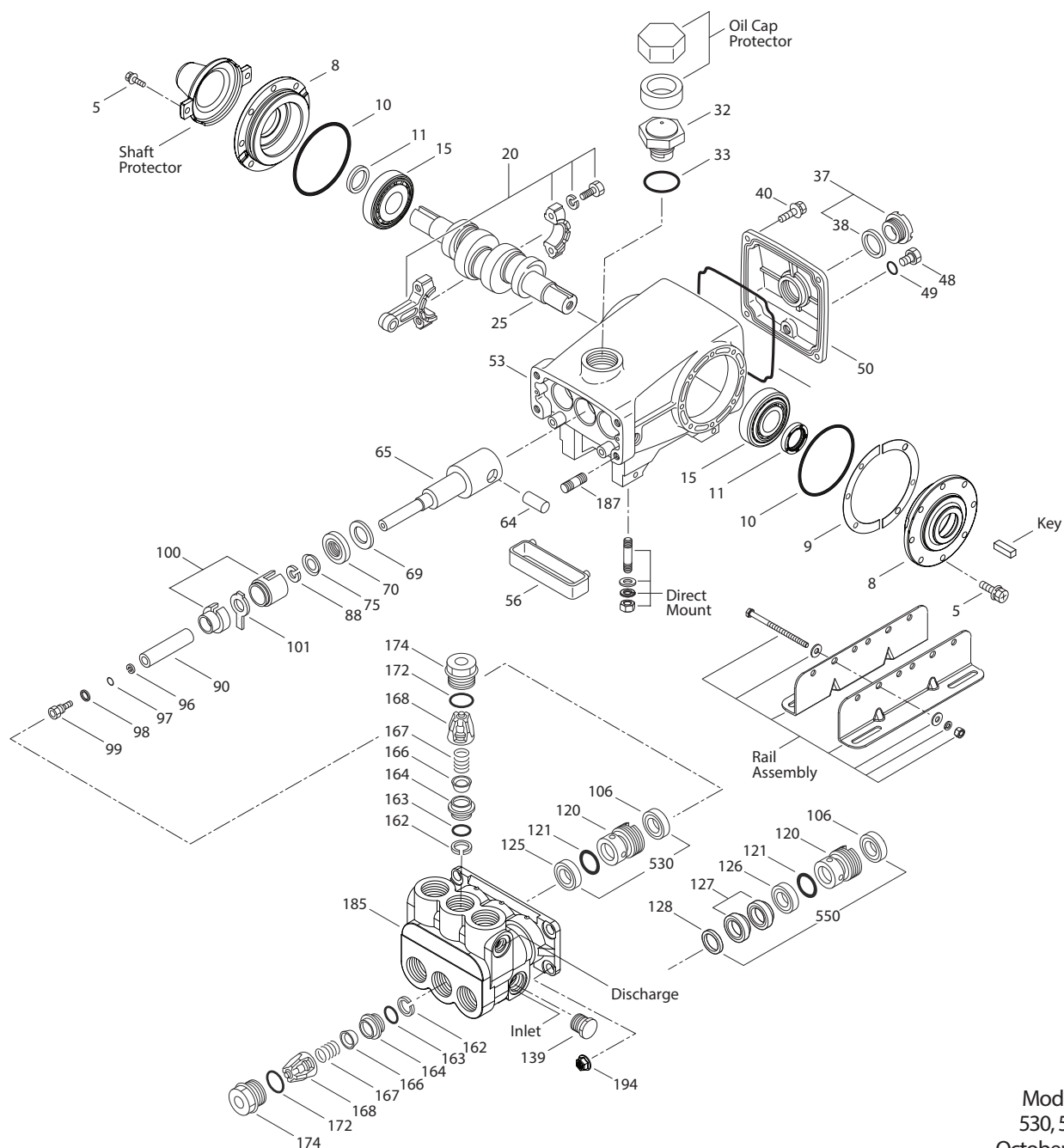
ITEM	PART NUMBER	MATL	PART NUMBER	MATL	DESCRIPTION	QTY
	530		550			
5	125824	STCP R	125824	STCP R	Screw, HHC, Sems (M6 x 16) (See Tech Bulletin 074)	8
8	133571	ALE	133571	ALE	Cover, Bearing	2
9	815280	FBR	815280	FBR	Shim, Split, 2-Piece	1
10	12393	NBR	12393	NBR	O-Ring, Bearing Cover	2
11	43222	NBR	43222	NBR	Seal, Oil, Crankshaft	2
15	43221	STL	43221	STL	Bearing, Roller	2
20	48863	TNM	48863	TNM	Rod, Assembly, Connecting (See Tech Bulletin 074)	3
25	43220	FCM	43220	FCM	Crankshaft, Dual-End (M24)	1
32	43211	ABS	43211	ABS	Cap, Oil Filler	1
33	14177	NBR	14177	NBR	O-Ring, Filler Cap–70D	1
37	92241	PC	92241	PC	Gauge, Oil, Bubble with Gasket–80D (See Tech Bulletin 074)	1
38	44428	NBR	44428	NBR	Gasket, Flat, Oil Gauge–80D	1
40	125824	STCP R	125824	STCP R	Screw, HHC Sems (M6 x16) (See Tech Bulletin 074)	4
48	25625	STCP	25625	STCP	Plug, Drain (¼" x 19 BSP)	1
49	23170	NBR	23170	NBR	O-Ring, Drain Plug–70D	1
50	133569	ALE	133569	ALE	Cover, Rear	1
51	14047	NBR	14047	NBR	O-Ring, Rear Cover–70D	1
53	133593	ALE	133593	ALE	Crankcase	1
56	43240	POP	43240	POP	Pan, Oil	1
64	43237	CM	43237	CM	Pin, Crosshead	3
65	43229	ZZCP	43229	ZZCP	Rod, Plunger	3
69	126589	STCP R	126589	STCP R	Washer, Oil Seal	3
70	43228	NBR	43228	NBR	Seal, Oil, Crankcase	3
75	43328	S	43328	S	Slinger, Barrier	3
88	45697	S	45697	S	Washer, Keyhole (M18 x M10)	3
90	43232	CC	—	—	Plunger (M18 x 77) (Model 530)	3
	—	—	43311	CC	Plunger (M16 x 77) (Model 550)	3
96	43235	PTFE	43235	PTFE	Backup Ring, Plunger Retainer	3
97	17399	NBR	17399	NBR	O-Ring, Plunger Retainer–80D	3
98	45891	CU	45891	CU	Gasket, Plunger Retainer	3
99	104360	S	104360	S	Retainer, Plunger with Stud (See Tech Bulletin 074)	3
100	45689	PVDF	45689	PVDF	Retainer, Seal, 2-Piece	3
101	43239	—	43313	—	Wick, Long Tab	3
106	43243	NBR	43316	NBR	Seal, Low-Pressure with S-Spring	3
120	45683	BB	45684	BB	Case, Seal (See Tech Bulletin 074)	3
121	20285	NBR	20285	NBR	O-Ring, Seal Case–70D	3
125	43245	SNG	—	—	Seal, High-Pressure with S-Support (Model 530)	3
126	—	—	43320	BB	Adapter, Female	3
127	—	—	43319	SNG	V-Packing (Model 550)	6
128	—	—	43318	BB	Adapter, Male	3
139	22179	BBCP	22179	BBCP	Plug, (½" NPT[M])	1
162	43248	PTFE	43248	PTFE	Backup Ring, Seat	6
163	43249	NBR	43249	NBR	O-Ring, Seat–80D	6
164	43722	S	43722	S	Seat	6
166	43721	S	43721	S	Valve	6
167	43751	S	43751	S	Spring	6
168	44564	PVDF	44564	PVDF	Retainer, Spring	6
172	17617	NBR	17617	NBR	O-Ring, Valve Plug–90D	6
174	43851	BBCP	43851	BBCP	Plug, Valve (See Tech Bulletin 074)	6
185	45417	BBCP	45547	BBCP	Head, Manifold	1
187	46868	S	46868	S	Stud, Manifold (M10 x 35)	4
194	126567	STCP R	126567	STCP R	Nut, Flanged (M10) (See Tech Bulletin 074)	4

Bold print part numbers are unique to a particular pump model.

R Components comply with RoHS Directive For additional technical information see www.catpumps.com/literature/tech-bulletins.

MATERIAL CODES (Not Part of Part Number): ABS=ABS Plastic AL=Aluminum ALE=Aluminum Epoxy BB=Brass BBCP=Brass/Chrome Plated CC=Ceramic
CM=Chrome-Moly CU=Copper F=Cast Iron FBR=Fiber FCM=Forged Chrome-moly FPM=Fluorocarbon HT=Hi-Temp NBR=Medium Nitrile (Buna-N) PC=Poly Carbonate
PE=Polyethylene POP=Polypropylene PTFE=Pure Polytetrafluoroethylene PVDF=Polyvinylidene Fluoride S=304SS SNG=Special Blend (Buna)
STCP=Steel/Chrome Plated STL=Steel STZP=Steel/Zinc Plated TNM=Special High Strength ZZCP=Zamak/Chrome Plated

EXPLODED VIEW



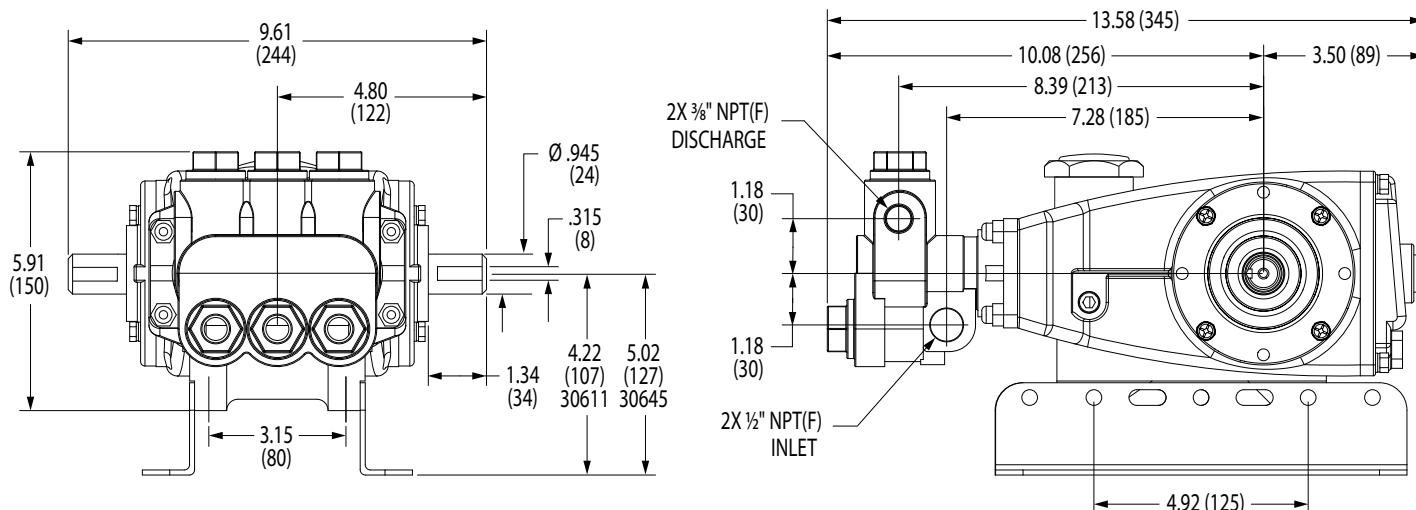
Models
530, 550
October 2024

OPTIONAL PARTS AND ACCESSORIES

PART	DESCRIPTION	QTY
30067	Key (M8 x 7.5 x 25)	1
30611	Assembly, Rail (4.22" See Dimensional Drawing)	1
30645	Assembly, Rail (5.02" See Dimensional Drawing)	1
30660	Assembly, Mount (Not Shown)	1
30243	Mount, Direct	1
670066	Protector, Shaft with Two (2) Screws (M6 x 20)	1
828710	Protector, Oil Cap with Foam Gasket	1
34334	Kit, Oil Drain (3/8" x 24") (Not Shown)	1
33000	Hub, "H" 24 mm (Not Shown)	1

SERVICE PARTS

PART	DESCRIPTION	QTY
30488	Kit, Seal – Standard NBR (Model 530)	1
30610	Kit, Seal – Standard NBR (Model 550)	1
30820	Kit, Valve – Standard NBR	2
6107	Oil, Bottle (21 oz) (Fill to Specified Crankcase Capacity Prior to Start-up)	1-2
33005	Socket, Seal Case 1/2" Drive (Not Shown)	1
30696	Reverse Pliers (Not Shown)	1
812183	Head, Complete with NBR Seals and O-Rings (Model 530)	1
812184	Head, Complete with NBR Seals and O-Rings (Model 550)	1



SEAL KITS

One (1) seal kit required per pump

PUMP MODELS	530	530	530	550	550	550		
	NBR (STD)	FPM (.0110)	HT (.3000)	NBR (STD)	FPM (.0110)	HT (.3000)		
	30488	32172	77067	30610	32936*	31610		
ITEM (Included in Seal Kits)							DESCRIPTION	QTY
97	17399	14160	17399	17399	14160	17399	O-Ring, Plunger Retainer	3
101	43239	43239	43239	43313	43313	43313	Wick, Long Tab	3
106	43243	44926	43243	43316	106660	43316	Seal, Low-Pressure, with S-Spring	3
121	20285	11693	20285	20285	11693	20285	O-Ring, Seal Case	3
125	43245	44925	46652	—	—	—	Seal, High-Pressure, with S-Support	3
127	—	—	—	43319	46287	46287	V-Packing	6

* Review individual parts in each kit for material code identification.

VALVE KITS

Two (2) valve kits required per pump

PUMP MODELS	NBR (STD)	FPM (.0110)	HT (.3000)		
530, 550	30820	31263	30820		
ITEM (Included in Valve Kits)				DESCRIPTION	QTY
162	43248	43248	43248	Backup Ring, Seat	3
163	43249	44383	43249	O-Ring, Seat	3
164	43722	43722	43722	Seat	3
166	43721	43721	43721	Valve	3
167	43751	43751	43751	Spring	3
168	44564	44564	44564	Retainer, Spring	3
172	17617	11691	17617	O-Ring, Valve Plug	3

⚠ CAUTIONS AND WARNINGS

All high-pressure systems require a primary pressure regulating device (e.g. regulator, unloader) and a secondary pressure relief device (e.g. pop-off valve, relief valve). Failure to install such relief devices could result in personal injury or damage to pump or property. Cat Pumps does not assume any liability or responsibility for the operation of a customer's high-pressure system. Read all CAUTIONS and WARNINGS before commencing service or operation of any high-pressure system. The CAUTIONS and WARNINGS are included in each Service Manual and with each Accessory Data sheet. CAUTIONS and WARNINGS can also be viewed online at www.catpumps.com/dynamic-literature/cautions-and-warnings or can be requested directly from Cat Pumps.

WARRANTY

View the Limited Warranty online at www.catpumps.com/literature/cat-pumps-limited-warranty